

DECLASSIFIED

Document Control No.: SAT.20103.1029.359

4/23/17
Date: Initial: *jl*

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

CONFIDENTIAL

SITE SUMMARY AND RECOMMENDATION

The Haller Testing Laboratories, Inc. (HTL) site (CERCLIS ID NJD986578284), a former asphalt sampling and concrete testing facility, is located at 336 Leland Avenue, Plainfield, Union County, New Jersey. The site consists of City of Plainfield Block 405, Lots 7 and 14, which have a total acreage of approximately 0.46 acre. The geographic coordinates of the site are 40° 37' 52.8" N latitude and 74° 24' 12.4" W longitude. The HTL site extends from Leland Avenue to the next parallel street, Watson Avenue. Adjacent properties include a child-care center to the southeast and an outreach center to the northwest along Leland Avenue, and residences adjacent to the site along Watson Avenue.

Two buildings are located on the HTL site: a main building constructed of brick and masonry, and a small building with two garage doors located 20 feet south of the main building. Both buildings are located on Block 405, Lot 7, and both are currently vacant. According to Plainfield building permit records, the brick factory (main building) was constructed on site in 1921, and the garage (small building) was built in 1950. A house was located on Block 405, Lot 14 from 1940 until the late 1970s, when the house was razed and HTL began to use that lot for storage. HTL operated at the site as a researcher and tester of construction and engineering materials from approximately 1927 until January 1993. Operations at the site included physical strength testing of concrete cylinders and asphalt sampling for the construction industry. New Jersey Department of Environmental Protection (NJDEP) reported in 1985 that HTL was using 1,1,1-trichloroethane (TCA) to dissolve asphalt samples and hydrochloric acid to wash concrete samples.

Throughout all or most of its operational history, HTL discharged wastewater from its chemistry lab sink and testing machine room slop sink into a small, unlined subsurface drainage pit on the southeast (also referred to as 'south' or 'east') side of the main building. The company also discharged wastewater from its asphalt testing room sink and wet room floor drains onto the ground or into a pit on the northwest (also referred to as 'north' or 'west') side of the building. HTL never possessed or applied for a New Jersey Pollutant Discharge Elimination System (NJPDDES) discharge to groundwater permit. Despite directives from NJDEP in 1985, 1986, and 1987 to cease unpermitted discharges, HTL continued to discharge at least until February 3, 1988.

NJDEP observed red and gray sludge in the southeastern drainage pit and collected surface soil samples from both the southeast and northwest discharge points on February 6, 1986. Ethylbenzene, p-cymene, and toluene were detected in a sample from the southeastern pit, while volatile organic compounds (VOC) were not detected in a sample collected under the pipe outfall on the northwest side. On April 28, 1986, NJDEP attempted to complete soil borings in the southeastern pit, encountered 1 foot of sludge underlain by gravel, was unable to advance any further, and collected a sample at the bottom of the sludge. The analytical results indicated the presence of chloroform at 36,000 parts per billion (ppb); 1,1-dichloroethane (1,1-DCA) at 3,560 ppb; 1,1-dichloroethene (1,1-DCE) at 3,220 ppb; tetrachloroethene (PCE) at 140 ppb; and trichloroethene (TCE) at 1,350 ppb. Based on the results, NJDEP determined that HTL was a probable contributor to groundwater contamination in Plainfield and directed HTL in June 1986 to initiate a Soil Boring Investigation at the site.

217067



CONFIDENTIAL - NOT FOR PUBLIC RELEASE**CONFIDENTIAL****SITE SUMMARY AND RECOMMENDATION (continued)**

Due to HTL's failure to comply with the June 1986 and previous Directives, NJDEP issued HTL an Administrative Order (AO) on May 21, 1987, ordering HTL to: [1] cease all unpermitted discharges immediately, [2] remove and properly dispose of all contaminated materials from the southeastern drainage pit within 60 days after receipt of the AO, and [3] plan and implement a Remedial Investigation (RI) at the site under NJDEP's guidance. HTL continued its unpermitted discharge at least until February 3, 1988, and failed to comply with the AO as of February 14, 1989. However, NJDEP data indicate that the company shipped 1,773 pounds of F002 waste off site in 1990. The available record for the action does not list the specific waste source of origin.

NJDEP performed further investigation at the site in 1993. During a pre-sampling assessment on June 9, 1993, after the facility had stopped operating, NJDEP noted the presence of a full drum labeled as TCA and a half-full drum labeled as hazardous waste on the rear porch of the main building. There were also empty drums distributed throughout the property, but NJDEP did not observe the drainage pits and assumed them to have been filled in. Inside the small building, NJDEP registered high readings on a radiation meter within 2 feet of a wooden box labeled as "Special Form Type 'A', Radioactive Sealed Source, U.S.A. DOT 7A" and "Radioactive Material". The box contained moisture density gauges, sealed sources of radium 226 - beryllium for which HTL had a license but also had a history of incidents and handling violations dating back to 1974.

On September 8, 1993, NJDEP collected fourteen soil samples from depths of 1 to 3 feet at the site. The analytical results indicated the presence of PCE; TCE; benzene; 1,1-DCA; toluene; and 1,1,1-TCA in some of the samples, at individual concentrations ranging from 2 to 180 micrograms per kilogram (ug/kg - equivalent to ppb). Several semivolatile, pesticide, and PCB compounds were also detected. Lead was detected in all the samples, at concentrations up to 594 milligrams per kilogram (mg/kg), and mercury was detected at concentrations as high as 46.7 mg/kg.

On March 29, 2000, a representative of the EPA Removal Program inspected the HTL property and observed that drums and other materials had been removed from the site. NJDEP informed EPA that an interim owner, who bought the property from HTL and later sold it to the current owner, had conducted the removal in 1995 after receiving a March 1993 NJDEP letter emphasizing the need for removal of the drums.

The Region 2 Site Assessment Team (Region 2 SAT) conducted Site Inspection Prioritization (SIP) field investigation and sampling activities at the site from November 2001 until February 2002. The SIP investigation included the installation of five on-site monitoring wells and the completion of an additional soil boring to the top of bedrock. Region 2 SAT collected surface soil samples on November 6, 2001; subsurface soil samples during drilling and installation of the monitoring wells in January 2002; and groundwater samples from four of the completed monitoring wells and four nearby public supply wells in February 2002. Laboratories within EPA's Contract Laboratory Program (CLP) analyzed the SIP samples for Target Compound List (TCL) organic parameters and Target Analyte List (TAL) metals. Some on-site samples were also analyzed for Total Alpha Radium outside the CLP.

CONFIDENTIAL - NOT FOR PUBLIC RELEASE**CONFIDENTIAL****SITE SUMMARY AND RECOMMENDATION (continued)**

The SIP analytical results indicate that benzene, mercury, cadmium, chromium, polychlorinated biphenyls (PCB), some polyaromatic hydrocarbons (PAH), and a few pesticides are present in surface soils at concentrations significantly above background. Additionally, PCE was detected below sample quantitation limits (SQL) in three subsurface soil samples collected in the vicinity of the former drainage pits. The groundwater sample collected nearest the northwestern drainage pit showed a PCE concentration of 47 ug/L, significantly higher than the background monitoring well concentrations of 9.3 ug/L and 11 ug/L. The background samples were collected from two monitoring wells at the southwest end of the property, further from the sources but not necessarily outside the influence of contamination from the site. Total alpha radium was not detected at significant concentrations in any of the soil or groundwater samples.

PCE was detected in SIP groundwater samples from three public supply wells within 0.3 mile east-northeast of the site, at concentrations ranging from 3.9 ug/L to 7.2 ug/L. PCE was not detected in duplicate background samples from a public supply well located 0.94 mile southeast of the site. The contaminated public wells each serve an approximate population of 1,515, so about 4,545 people are subject to Level I actual contamination that is attributable or partially attributable to the HTL site. The water withdrawn from those wells is treated in a stripping tower before it is distributed to that population.

The aquifer of concern is the Passaic Formation, a sedimentary sequence formerly known as the Brunswick Formation, and the overlying stratified drift to which it is hydraulically connected. Potential groundwater receptors include approximately 86,000 people relying on public supply wells within 4 miles of the site. The nearest documented drinking water well is located approximately 0.15 mile east-northeast of the site. The nearest private well is located approximately 0.37 mile north-northwest of the site. Site sources lie within the designated Wellhead Protection Areas for several public supply wells. The surface water migration limit includes habitats known to be used by State-designated threatened species and approximately 14 miles of HRS-eligible wetland frontage. There are approximately 175,000 residents and 1,332 acres of HRS-eligible wetlands located within 4 miles of the site.

A SuperScreen (Version 1.1) analysis of the HTL site was completed in which the site was evaluated on the basis of contaminated soil, and an observed release to groundwater and actual contamination (Level I) of three public supply wells. Due to the actual contamination of the public supply wells, the groundwater pathway score is 100.00. The overall site score is 50.00, which exceeds the score required for placement on the NPL. A recommendation of **HIGH PRIORITY FOR FURTHER ACTION (HPFA)** is given to the Haller Testing Laboratories, Inc. site.

**WORKSHEET FOR COMPUTING HRS SITE SCORE
HALLER TESTING LABORATORIES, INC.**

CONFIDENTIAL

	<u>S</u>	<u>S²</u>
1. Ground Water Migration Pathway Score (S_{gw}) (from Table 3-1, line 13)	<u>100.00</u>	<u>10,000.00</u>
2a. Surface Water Overland/Flood Migration Component (from Table 4-1, line 30)	<u>1.16</u>	
2b. Ground Water to Surface Water Migration Component (from Table 4-25, line 28)	<u>0.00</u>	
2c. Surface Water Migration Pathway Score (S_{sw}) Enter the larger of lines 2a and 2b as the pathway score.	<u>1.16</u>	<u>1.35</u>
3. Soil Exposure Pathway Score (S_s) (from Table 5-1, line 22)	<u>0.01</u>	<u>0.00</u>
4. Air Migration Pathway Score (S_a) (from Table 6-1, line 12)	<u>3.71</u>	<u>13.77</u>
5. Total of $S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		<u>10,015.12</u>
6. HRS Site Score Divide the value on line 5 by 4 and take the square root	<u>50.04</u>	

TABLE 3-1 --GROUND WATER MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned
Aquifer Evaluated: Stratified Drift		
Likelihood of Release to an Aquifer:		
1. Observed Release	550	550.00
2. Potential to Release:		
2a. Containment	10	0.00
2b. Net Precipitation	10	0.00
2c. Depth to Aquifer	5	0.00
2d. Travel Time	35	0.00
2e. Potential to Release [lines 2a(2b + 2c + 2d)]	500	0.00
3. Likelihood of Release (higher of lines 1 and 2e)	550	550.00
Waste Characteristics:		
4. Toxicity/Mobility	(a)	10,000.00
5. Hazardous Waste Quantity	(a)	100.00
6. Waste Characteristics	100	32.00
Targets:		
7. Nearest Well	(b)	50.00
8. Population:		
8a. Level I Concentrations	(b)	45,454.50
8b. Level II Concentrations	(b)	0.00
8c. Potential Conamination	(b)	2,017.00
8d. Population (lines 8a + 8b + 8c)	(b)	47,471.50
9. Resources	5	5.00
10. Wellhead Protection Area	20	20.00
11. Targets (lines 7 + 8d + 9 + 10)	(b)	47,546.50
Ground Water Migration Score for an Aquifer:		
12. Aquifer Score [(lines 3 x 6 x 11)/82,5000] ^c	100	100.00
Ground Water Migration Pathway Score:		
13. Pathway Score (S_{gw}), (highest value from line 12 for all aquifers evaluated) ^c	100	100.00

^a Maximum value applies to waste characteristics category^b Maximum value not applicable^c Do not round to nearest integer

TABLE 3-1 --GROUND WATER MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned
Aquifer Evaluated: Passaic Formation		
Likelihood of Release to an Aquifer:		
1. Observed Release	550	550.00
2. Potential to Release:		
2a. Containment	10	0.00
2b. Net Precipitation	10	0.00
2c. Depth to Aquifer	5	0.00
2d. Travel Time	35	0.00
2e. Potential to Release [(lines 2a(2b + 2c + 2d)]	500	0.00
3. Likelihood of Release (higher of lines 1 and 2e)	550	550.00
Waste Characteristics:		
4. Toxicity/Mobility	(a)	10,000.00
5. Hazardous Waste Quantity	(a)	100.00
6. Waste Characteristics	100	32.00
Targets:		
7. Nearest Well	(b)	50.00
8. Population:		
8a. Level I Concentrations	(b)	45,454.50
8b. Level II Concentrations	(b)	0.00
8c. Potential Conamination	(b)	2,017.00
8d. Population (lines 8a + 8b + 8c)	(b)	47,471.50
9. Resources	5	5.00
10. Wellhead Protection Area	20	20.00
11. Targets (lines 7 + 8d + 9 + 10)	(b)	47,546.50
Ground Water Migration Score for an Aquifer:		
12. Aquifer Score [(lines 3 x 6 x 11)/82,5000] ^c	100	100.00
Ground Water Migration Pathway Score:		
13. Pathway Score (S_{gw}), (highest value from line 12 for all aquifers evaluated) ^c	100	100.00

^a Maximum value applies to waste characteristics category

^b Maximum value not applicable

^c Do not round to nearest integer

TABLE 4-1 --SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned
Watershed Evaluated: Raritan River Watershed		
Drinking Water Threat		
Likelihood of Release:		
1. Observed Release	550	0.00
2. Potential to Release by Overland Flow:		
2a. Containment	10	10.00
2b. Runoff	25	1.00
2c. Distance to Surface Water	25	6.00
2d. Potential to Release by Overland Flow [(lines 2a(2b + 2c))]	500	70.00
3. Potential to Release by Flood:		
3a. Containment (Flood)	10	10.00
3b. Flood Frequency	50	25.00
3c. Potential to Release by Flood (lines 3a x 3b)	500	250.00
4. Potential to Release (lines 2d + 3c, subject to a maximum of 500)	500	320.00
5. Likelihood of Release (higher of lines 1 and 4)	550	320.00
Waste Characteristics:		
6. Toxicity/Persistence	(a)	10,000.00
7. Hazardous Waste Quantity	(a)	1.00
8. Waste Characteristics	100	10.00
Targets:		
9. Nearest Intake	50	0.00
10. Population:		
10a. Level I Concentrations	(b)	0.00
10b. Level II Concentrations	(b)	0.00
10c. Potential Contamination	(b)	0.00
10d. Population (lines 10a + 10b + 10c)	(b)	0.00
11. Resources	5	0.00
12. Targets (lines 9 + 10d + 11)	(b)	0.00
Drinking Water Threat Score:		
13. Drinking Water Threat Score [(lines 5x8x12)/82,500, subject to a max of 100]	100	0.00
Human Food Chain Threat		
Likelihood of Release:		
14. Likelihood of Release (same value as line 5)	550	320.00
Waste Characteristics:		
15. Toxicity/Persistence/Bioaccumulation	(a)	5.00E+8
16. Hazardous Waste Quantity	(a)	1.00
17. Waste Characteristics	1000	100.00
Targets:		
18. Food Chain Individual	50	0.00
19. Population		
19a. Level I Concentration	(b)	0.00
19b. Level II Concentration	(b)	0.00
19c. Potential Human Food Chain Contamination	(b)	6.03E-4
19d. Population (lines 19a + 19b + 19c)	(b)	6.03E-4
20. Targets (lines 18 + 19d)	(b)	6.03E-4
Human Food Chain Threat Score:		
21. Human Food Chain Threat Score [(lines 14x17x20)/82500, subject to max of 100]	100	2.30E-4
Environmental Threat		
Likelihood of Release:		
22. Likelihood of Release (same value as line 5)	550	320.00
Waste Characteristics:		

1000000000

CONFIDENTIAL

23. Ecosystem Toxicity/Persistence/Bioaccumulation	(a)	5.00E+8	
24. Hazardous Waste Quantity	(a)	1.00	
25. Waste Characteristics	1000		100.00

Targets:

26. Sensitive Environments			
26a. Level I Concentrations	(b)	0.00	
26b. Level II Concentrations	(b)	0.00	
26c. Potential Contamination	(b)	3.00	
26d. Sensitive Environments (lines 26a + 26b + 26c)	(b)	3.00	
27. Targets (value from line 26d)	(b)		3.00

Environmental Threat Score:

28. Environmental Threat Score [(lines 22x25x27)/82,500 subject to a max of 60]	60		1.16
---	----	--	------

Surface Water Overland/Flood Migration Component Score for a Watershed

29. Watershed Score ^c (lines 13+21+28, subject to a max of 100)	100		1.16
--	-----	--	------

Surface Water Overland/Flood Migration Component Score

30. Component Score (S _{sw}) ^c (highest score from line 29 for all watersheds evaluated)	100		1.16
---	-----	--	------

^a Maximum value applies to waste characteristics category

^b Maximum value not applicable

^c Do not round to nearest integer

TABLE 5-1 SOIL EXPOSURE PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned
Likelihood of Exposure:		
1. Likelihood of Exposure	550	0.00
Waste Characteristics:		
2. Toxicity	(a)	0.00
3. Hazardous Waste Quantity	(a)	0.00
4. Waste Characteristics	100	0.00
Targets:		
5. Resident Individual	50	0.00
6. Resident Population:		
6a. Level I Concentrations	(b)	0.00
6b. Level II Concentrations	(b)	0.00
6c. Population (lines 6a + 6b)	(b)	0.00
7. Workers	15	0.00
8. Resources	5	0.00
9. Terrestrial Sensitive Environments	(c)	0.00
10. Targets (lines 5 + 6c + 7 + 8 + 9)	(b)	0.00
Resident Population Threat Score		
11. Resident Population Threat Score (lines 1 x 4 x 10)	(b)	0.00
Nearby Population Threat		
Likelihood of Exposure:		
12. Attractiveness/Accessibility	100	50.00
13. Area of Contamination	100	5.00
14. Likelihood of Exposure	500	5.00
Waste Characteristics:		
15. Toxicity	(a)	10,000.00
16. Hazardous Waste Quantity	(a)	10.00
17. Waste Characteristics	100	18.00
Targets:		
18. Nearby Individual	1	1.00
19. Population Within 1 Mile	(b)	11.00
20. Targets (lines 18 + 19)	(b)	12.00
Nearby Population Threat Score		
21. Nearby Population Threat (lines 14 x 17 x 20)	(b)	1,080.00
Soil Exposure Pathway Score:		
22. Pathway Score ^d (S _p), [(lines (11+21)/82,500, subject to max of 100]	100	0.01

^a Maximum value applies to waste characteristics category

^b Maximum value not applicable

^c No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited to a maximum of 60

^d Do not round to nearest integer

TABLE 6-1 --AIR MIGRATION PATHWAY SCORESHEET

Factor categories and factors	Maximum Value	Value Assigned
Likelihood of Release:		
1. Observed Release	550	0.00
2. Potential to Release:		
2a. Gas Potential to Release	500	360.00
2b. Particulate Potential to Release	500	280.00
2c. Potential to Release (higher of lines 2a and 2b)	500	360.00
3. Likelihood of Release (higher of lines 1 and 2c)	550	360.00
Waste Characteristics:		
4. Toxicity/Mobility	(a)	2,000.00
5. Hazardous Waste Quantity	(a)	1.00
6. Waste Characteristics	100	6.00
Targets:		
7. Nearest Individual	50	0.00
8. Population:		
8a. Level I Concentrations	(b)	0.00
8b. Level II Concentrations	(b)	0.00
8c. Potential Contamination	(b)	141.00
8d. Population (lines 8a + 8b + 8c)	(b)	141.00
9. Resources	5	0.00
10. Sensitive Environments:		
10a. Actual Contamination	(c)	0.00
10b. Potential Contamination	(c)	0.73
10c. Sensitive Environments (lines 10a + 10b)	(c)	0.73
11. Targets (lines 7 + 8d + 9 + 10c)	(b)	141.73
Air Migration Pathway Score:		
12. Pathway Score (S_a) [(lines 3 x 6 x 11)/82,500] ^d	100	3.71

^a Maximum value applies to waste characteristics category

^b Maximum value not applicable

^c No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.

^d Do not round to nearest integer